

ABSTRACT

In realizing an entire-screen simultaneous shutter function using a solid-state imaging device having a device structure as a CMOS solid-state imaging device, the restriction undergone by exposure time is relieved to secure a sufficient exposure time with swift operation. Separately from a transfer T_r for transferring a signal charge of a buried-type PD to an FD, a drain T_r is provided to exclude a signal charge of the buried PD. Both a channel potential on the drain transistor when turned on and a channel potential on the transfer transistor when turned on are set higher than a depleting potential for the PD. This makes it possible to completely transfer the signal charge of the PD by both the transfer T_r and the drain T_r . In the operation to sequentially read out a signal charge from the FD on a pixel-row basis, PD exposure operation is started in a course of reading out the same.